

WHAT IS CLAIMED IS:

1. An image capturing device, comprising:
  - a solid image capturing element;
  - 5 a driving circuit for driving the solid image capturing element to obtain an image signal;
  - a clamping circuit for clamping a reference level of the image signal generated by the solid image capturing element at a predetermined level; and
  - 10 a control circuit for controlling clamping capability of the clamping circuit.
2. The device according to claim 1, wherein
  - the control circuit controls such that a clamping
  - 15 capability attained within a predetermined period after start of image capturing by the solid image capturing element becomes different from a clamping capability attained in another period.
- 20 3. The device according to claim 2, wherein
  - the control circuit controls such that the clamping capability within a predetermined period after start of image capturing by the solid image capturing element becomes higher in level than the clamping capability attained in another
  - 25 period.
4. The device according to claim 2, wherein
  - the control circuit controls such that the clamping

circuit operates longer within a predetermined period after start of image capturing by the solid image capturing element than in another period.

5 5. The device according to claim 2, wherein  
the clamping circuit comprises two or more clamping  
circuit sections,  
and

the control circuit controls such that a larger number  
10 of clamping circuit sections operate within a predetermined  
period after start of image capturing by the solid image  
capturing element than in another period.

6. The device according to claim 5, wherein  
15 the clamping circuit comprises two or more clamping  
circuit sections which respectively have clamping  
capabilities at different levels, and

the control circuit controls such that a clamping circuit  
section at a higher level operates within a predetermined  
20 period after start of image capturing by the solid image  
capturing element while a clamping circuit section at a lower  
level operates in another period.

7. The device according to claim 2, wherein  
25 the clamping circuit comprises two or more clam  
circuit sections, and

the control circuit controls such that a larger number  
of clamping circuit sections operate longer within a

predetermined period after start of image capturing by the solid image capturing element than in another period.

8. The device according to claim 2, wherein

5 the clamping circuit comprises two or more clamping circuit sections which respectively have clamping capabilities at different levels, and

the control circuit controls such that a clamping circuit section at a higher level operates longer within a predetermined period after start of image capturing by the  
10 solid image capturing element than in another period.

9. The device according to claim 4, wherein

the control circuit controls such that a clamping  
15 circuit section operates, within a predetermined period after image capturing by the solid image capturing element is started, in a period which is longer by an amount  $\Delta L$  than a period  $L$  in which the clamping circuit section operates in another period.

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10. The device according to claim 9, wherein

the control circuit controls such that the amount  $\Delta L$  remains constant within a predetermined period after commencement of image capturing by the solid image capturing  
25 element.

11. The device according to claim 9, wherein

the control circuit controls so as to reduce the amount

$\Delta L$  within a predetermined period after commencement of image capturing by the solid image capturing element.

12. An image capturing device, comprising:

5 a solid image capturing element;

a driving circuit for driving the solid image capturing element to obtain an image signal;

a clamping circuit for clamping a reference level of the image signal generated by the solid image capturing element  
10 at a predetermined level;

a control circuit for controlling such that a clamping capability attained within a predetermined period after start of image capturing by the solid image capturing element becomes different from a clamping capability attained in another  
15 period; and

a detection circuit for measuring an inoperative period during which the solid image capturing element suspends image capturing,

wherein

20 the control circuit controls such that the clamping capability within a predetermined period after start of image capturing by the solid image capturing element becomes higher in level than the clamping capability attained in another period, and controls such that the clamping capability becomes  
25 higher in level with respect to a longer inoperative period.

13. The device according to claim 12, wherein

the control circuit controls such that the clamping

circuit operates longer within a predetermined period after start of image capturing by the solid image capturing element than in another period, and controls such that the clamping circuits operates longer with respect to a longer inoperative  
5 period.

14. The device according to claim 12, wherein  
the clamping circuit comprises two or more clamping  
circuit sections,  
10 and  
the control circuit controls such that a larger number  
of clamping circuit sections operate within a predetermined  
period after start of image capturing by the solid image  
capturing element than in another period, and controls such  
15 that a larger number of clamping circuit sections operate with  
respect to a longer inoperative period.

15. The device according to claim 12, wherein  
the clamping circuit comprises two or more clamping  
20 circuit sections having different levels of clamping  
capability, and  
the control circuit controls such that a clamping circuit  
section at a higher level operates within a predetermined  
period after start of image capturing by the solid image  
25 capturing element while a clamping circuit section at a lower  
level operates in another period, and controls such that the  
clamping capability becomes higher in level with respect to  
a longer inoperative period.

16. The device according to claim 2, further comprising:  
a buffer circuit for outputting a predetermined  
reference voltage; and

5 a switch connected between the buffer circuit and a  
signal line connected to an output terminal of the sold image  
capturing element, for switching between in an on state and  
in an off state,

wherein

10 the control circuit controls the clamping capability  
by changing a period in which the switch remains in an on  
state.

17. The device according to claim 2, further comprising:

15 a plurality of buffer circuits for outputting a  
predetermined reference voltage;

a selector for selecting at least one of the plurality  
of buffer circuits;

20 a switch connected between the buffer circuit  
selected by the selector and a signal line connected to an  
output terminal of the sold image capturing element, for  
switching between in an on state and in an off state,

wherein

25 the control circuits controls the clamping  
capability by changing either a type or a number of the  
buffer circuit selected by the selector.

18. The device according to claim 2, further comprising:

a plurality of buffer circuits for outputting a predetermined reference voltage;

a selector for selecting at least one of the plurality of buffer circuits;

5        a switch connected between the buffer circuit selected by the selector and a signal line connected to an output terminal of the sold image capturing element, for switching between in an on state and in an off state,

wherein

10       the control circuits controls the clamping capability by changing at least one of a period in which the switch remains in an on state, a type of the buffer circuit selected by the selector, and a number of the buffer circuit selected by the selector.

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